



500 EIGHTH Ave, Suite 1203, New York, NY. 10018



CCIP Bootcamp Service Provider*

(MPLS, BGP, QoS) Training

- Course Length:** 10 weeks (80 hours), Instructor-led
- Skill Development:** Understand networking technologies in the service provider arena including IP routing, IP QoS, BGP, and MPLS
- Prerequisites:** CCNP or equivalent experience
- Target Audience:** Network engineers making trans
- Course Objective:** Provide students with the knowledge, skills and practical experience to pass the CCNA exams
- Exams covered:** Cisco CCIP exams (BSCI, QoS, BGP, MPLS; emphasis will be on materials of the latter three)
- Lab:** One-year onsite and remote access (via web)

Topics to be covered: * Emphasis will be on materials from QoS, BGP, MPLS since the prerequisite will be CCNP, which covers BSCI already

Configuring BGP on Cisco Routers (BGP)

- I.** Configure, monitor and troubleshoot basic BGP to enable interdomain routing
- II.** Use BGP policy controls to influence the route selection
- III.** Use BGP attributes to influence the route selection
- IV.** Implement the correct BGP configuration to connect the customer's network to the Internet
- V.** Identify common BGP scaling issues and enable route reflection and confederations
- VI.** use available BGP tools and features to optimize the scalability Of the BGP routing protocol

Quality of Service (QoS)

- I.** Introduction to IP QoS
- II.** The Building Blocks of IP QoS
- III.** Introduction to Modular QoS CLI and Auto-QoS
- IV.** Classification and MarkingModule
- V.** Congestion Management & Avoidance
- VI.** Traffic Policing and Shaping
- VII.** Link Efficiency Mechanisms
- VIII.** Link Efficiency Mechanisms **IX.** QoS Best Practices

Open Lab Hours: Monday through Thurs, 10:00am to 9:30pm, Fri/Sat/Sun 9:30a to 5:30p

Implementing Cisco MPLS (MPLS)

- I.** Describe basic MPLS frame-mode and cell-mode architectures and identify how it supports applications that are used to address the drawbacks in traditional IP routing
- II.** Describe the Label Distribution Protocol (LDP) process by explaining label allocation, label distribution, label retention, label convergence and Penultimate Hop Popping (PHP) in both frame and cell modes
- III.** Given a diagram of a typical MPLS network solution, identify the Cisco IOS command syntax required to successfully configure and monitor MPLS operations on frame, switched WAN and LC-ATM interfaces
- IV.** Describe MPLS's peer-to-peer architecture and explain the routing and packet forwarding model in this architecture
- V.** Given a diagram of a typical simple MPLS VPN solution, identify the Cisco IOS command syntax required
- VI.** Given a diagram of a typical simple, hub-and-spoke, overlapping and central services MPLS VPN solution identify the Cisco IOS command syntax required

Routing (BSCI) See CCNP Bootcamp BSCI curriculum (student is assumed to be a CCNP or have equivalent experience)

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